What is claimed is:

1. A wind turbine comprising:

a rotor with at least one blade;

an alternator with a rotating portion attached to said rotor for rotation therewith and an armature that generates alternating current electricity when said rotating portion turns, wherein said armature has an internal inductance;

a rectifier for converting said AC electricity from said armature into a DC voltage; and

a power circuit operatively coupled to said rectifier for selectively shorting the AC voltage from said armature so as to store electrical energy within said internal inductance of said armature.

2. The wind turbine of claim 1 further comprising a controller that senses the rotational speed of said rotor and adjusts the duty cycle of said power circuit based upon said rotational speed.

3. The wind turbine of claim 2 further comprising a battery electrically connected to said rectifier.

4. The wind turbine of claim 3 wherein said controller momentarily shorts the AC voltage from said armature thereby causing an inductive voltage spike in said internal inductance of said armature sufficient to cause current to flow into said battery when said rotational speed is at a lower end of the range of generating speeds.

5. The wind turbine of claim 3 wherein said controller senses the charge in said battery and adjusts the duty cycle of said power circuit based upon said rotational speed and said battery charge.

6. The wind turbine of claim 1 further comprising a controller that senses the rotational speed of said blade and increases the duty cycle of said power circuit when said rotational speed reaches a predetermined level, thereby causing said blade to enter a condition of aerodynamic stall.

7. The wind turbine of claim 1 further comprising an inverter for converting said DC voltage to AC voltage suitable for connection to a utility grid.

8. The wind turbine of claim 7 wherein said power circuit boosts said DC voltage to a level sufficient to allow said inverter to operate without a boost function within said inverter.

9. The wind turbine of claim 1 wherein said power circuit has a switching frequency and said switching frequency is modulated in order to minimize tonal acoustic noise emission.

10. A wind turbine comprising:

a blade;

a permanent magnet alternator operatively connected to said blade wherein said alternator generates electricity when said blade rotates;

a controller for operating said alternator at variable speed and for controlling the power output from said wind turbine by aerodynamic stall.

11. The wind turbine of claim 10 wherein said controller senses the rotational speed of said blade and slows said alternator when said blade turns at a predetermined speed in order to causes said blade to enter a state of aerodynamic stall.

12. The wind turbine of claim 10 wherein said alternator comprises a rotating portion attached to said blade for rotation therewith and an armature that generates alternating

current electricity when said rotating portion turns, wherein said armature has an internal inductance;

a rectifier for converting said AC electricity from said armature into a DC voltage; and

a power circuit operatively coupled to said rectifier for selectively shorting the AC voltage from said armature so as to store electrical energy within said internal inductance of said armature.

13. The wind turbine of claim 12 wherein said controller selects a duty cycle for said power circuit that causes said wind turbine to operate at variable speed and that controls the power output from said wind turbine by aerodynamic stall.

14. The wind turbine of claim 13 wherein said controller senses the rotational speed of said blade and increases the duty cycle of said power circuit when said rotational speed reaches a predetermined level, thereby causing said blade to enter a condition of aerodynamic stall.

15. An electrical generation system comprising:

an alternator with a plurality of windings;

a power electronic controller for said alternator comprising a plurality of switching devices electrically connected to said windings for selectively shorting said windings wherein said switching devices are operated at a switching frequency;

wherein said switching frequency is modulated in order to minimize tonal acoustic noise emission.

16. The electrical generation system of claim 15 wherein said switching frequency is modulated at an interval of less than every 10 milliseconds.

17. The electrical generation system of claim 16 wherein said switching frequency is modulated every 1.6 milliseconds.